

Technical assessments from letter dated 3/10/97, D. Cool to A. Blough
NR-112-D-111-S 300 ML/MLT Gauges

1. 80 mm diameter shield. NR-112-D-111-S authorizes a minimum diameter of 100 mm.
 - a. TN-1031-D-108-S authorizes diameter ranging 80 to 200 mm.
 - b. Does Republic Engineered Steel need to amend material possession license?
2. New locking mechanism used at US Steel in Gary, IN.
 - a. Apgee provided Attachments 7 and 32. Attachment 32 is a large engineering drawing.
 - b. US Steel in Gary, IN, had shields with a diameter of 356 mm, which were disposed of (sent back to Germany) and replaced with new devices meeting the TN registration certificate (See John McGrath e-mail).
 - c. TN-1031-D-108-S states that “[t]he transport bridge must be down and two steel pins inserted before the shielding can be lifted out of measurement position.”
3. New term of “special key.”
 - a. Apgee provided Attachment 8 to clarify the term of “special key.”
4. Stainless steel construction of the source housings rather than carbon steel.
 - a. No safety concern
 - b. TN-1031-D-108-S authorizes either stainless steel or steel by stating “[t]he rod source is mounted vertically at the edge of a rotatable shield (lead or tungsten) which is encased in a steel or stainless steel cylinder.”
5. Spring-loaded detent, not authorized in NR-112-D-111-S, has been installed.
 - a. TN-1031-D-108-S authorizes a spring ball indent mechanism by stating that “[t]he ‘Open’ position of the shielding is secured using a spring ball indent mechanism situated either near the top or the bottom of the outer housing.”

Letter dated 4/12/99 from D. Broaddus to Bud Smith of Apgee

6. Source length of 275 mm vs. 290 mm.
 - a. TN-1031-D-108-S authorizes the source length range from 300 to 1000 mm.
7. 22 O-rings between bottom plate and the body of device are missing.
 - a. Region I closed Order Modifying License dated April 9, 1999, requiring modifications: (1) O-ring will be replaced; (2) the inner cylinder (shutter) will be coated with “nuclear quality anti-seize” lubricant; (3) the bottom plates will be secured with self-locking washers; and (4) each customer will be instructed to conduct periodic maintenance on the devices.
 - b. The modifications were implemented at US Steel in Gary, IN, on 3/31/2000.

Statement in SAFETY EVALUATION Section

The State of Tennessee issued the registration certificate (TN-1031-D-108-S, dated January 26, 2000) for the same device, but included different features not specified in NRC registration certificate such as:

	Tennessee cert.	NRC cert.
Isotope	Co-60 only	Co-60 and Cs-137
Activity	0.5 Ci (18.5 GBq)	0.3 Ci (11.1 GBq) for Co-60 0.5 Ci (18.5 GBq) for Cs-137
Leak test frequency	3 years	6 months
Source housing material	Stainless steel or carbon steel	Carbon steel
Source diameter	80 to 200 mm (3.15 to 7.87")	100 to 240 mm (3.94 to 9.45")
Source length	300 to 1000 mm (11.81 to 39.37")	up to 1600 mm (62.99")
New locking mechanism	included	not authorized
Spring-loaded detent	included	not authorized

For the upgrading the device involving O-rings between bottom plate and the body of device, Region I closed Order Modifying License (dated April 9, 1999), requiring the following modifications: (1) O-ring will be replaced; (2) the inner cylinder (shutter) will be coated with "nuclear quality anti-seize" lubricant; (3) the bottom plates will be secured with self-locking washers, and (4) each customer will be instructed to conduct periodic maintenance on the devices, on June 5, 2000.

The manufacturer reported that all of the old devices were disposed of (sent back to Germany) and replaced with new devices meeting the TN registration certificate.

REVIEWER NOTE FOR NR-0112-D-809-S

FROM: Seung J. Lee */RA/*

December 15, 2000

The checklist was not used for the preparation of the certificate because the information needed to make NR-0112-D-111-S inactive was very limited. The NRC staff used the following documents to make the device registration inactive: (1) letter dated March 10, 1997, from D. Cool to A. Blough, re: Technical Assessment of Apgee Corporation's Additional Responses, dated November 27, 1996, December 4, 1996, and December 20, 1996, to Confirmatory Action Letter 1-96-007 and Supplement; (2) letter dated April 12, 1999, from D. Broaddus of NRC to G. M. (Bud) Smith of Apgee; and (3) letter dated June 5, 2000, from H. Miller of NRC to G. M. (Bud) Smith of Apgee, re: Completion of Requirements of Order Modifying License dated April 9, 1999. Apgee Corp. was unresponsive to the NRC request for additional information and, therefore, the staff used the information currently available in the correspondence to inactivate the registration.

The State of Tennessee issued the registration certificate for the same device (TN-1031-D-108-S), dated January 26, 2000, which included some different technical features than the NRC registration.

Enclosed is the summary of items which the staff would normally document for inactivation. There are 7 items identified. However, this information was not provided by the manufacturer. Since none of these issues would cause a health and safety concern, the staff considered that the NRC registration certificate can be deactivated.

cc: Fritz Sturz